

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

-----  
**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** NH-985-1(340) Hall  
P. I. No.: 110465  
I-985 at S.R. 11/U.S. 129 Interchange

**OFFICE:** Engineering Services

**DATE:** May 30, 2008

**FROM:** Brian Summers, P.E., Project Review Engineer *REW*

**TO:** Brent Story, P.E. State Road and Airport Design Engineer

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
A-1	Eliminate the CD lanes through the Interchange and tie the ramps directly into the mainline I-985 roadway using standard acceleration / deceleration lanes	\$5,441,000	No	Based on the Capacity Analysis, a Level of Service "F" would occur for the Ramp diverge and merge areas. Future connectivity would be necessary since this is a middle section of the CD System that is proposed from Exit 20 to Exit 24.
A-3	(Alternative to A-1) Construct a single CD roadway through the Interchange	\$837,000	No	Based on the Capacity Analysis, a Level of Service "D" would occur for the SB AM merge and a LOS "F" for the NB PM diverge based on a one lane CD.
A-5	Increase the distance between Ridge Road and the SB Ramp Intersection, reduce the size of the WB to SB Loop Ramp and protect the sidewalk/ramp crossing	\$60,000	No	Results in additional impacts to Waters of the US in this quadrant. Mitigation costs would minimize or negate any cost savings.

ALT No.	Description	Savings PW & LCC	Implement	Comments
A-7 I-1	Reduce the width of the through travel lanes on S.R. 11, the S.R. 11 Bridges, and the cross streets from 12' to 11' (Assumes open dual Structures)	\$1,573,000	No	Projected traffic volumes (from 2004 counts) is 31, 750 ADT with 10% trucks. In addition, the existing S.R. 11 Bridges would not be connected requiring guardrail and/or guardrail anchors or Attenuators in the median.
I-3	(12' Lane Alt. to A-7, I-1) Eliminate the raised concrete median on the S.R. 11 Bridge by maintaining the dual structure concept (12' lanes)	\$1,111,000	No	Projected traffic volumes (from 2004 counts) is 31, 750 ADT with 10% trucks. In addition, the existing S.R. 11 Bridges would not be connected requiring guardrail and/or guardrail anchors or Attenuators in the median.
I-4	Revise the cost estimate to reflect current bridge widening costs (both bridge and concrete retaining wall abutment widening)	Design Suggestion	Yes	This should be done.
K-1	Eliminate the concrete barrier between the CD lanes and the mainline roadway	\$780,000	No	There would not be adequate Clear Zone between the mainline and CD lanes.
K-2	(Alternative to K-1) Use dual face guardrail in lieu of concrete median barrier between the CD and the mainline roadway	\$480,000	No	This would result in ongoing future maintenance costs associated with replacing or repairing the Double Faced Guardrail.
L-2	Consider realigning the NB I-985 Off Ramp closer to the signalized On Ramp intersection to provide additional weaving space for the ramp traffic	Design Suggestion	Yes	This should be done.

ALT No.	Description	Savings PW & LCC	Implement	Comments
N-2	Use a grass median in lieu of raised concrete median along S.R. 11	\$140,000 (proposed) \$15,000 (actual)	Yes/partial	A grass median will be used instead of concrete in the raised median.
P-2, 3, & 4	Eliminate the sidewalk on the north side of S.R. 11 between Ridge Road and the SB Off Ramp, on the <del>south</del> <sup>north</sup> side of S.R. 11 between the NB On Ramp and Monroe Drive and on South Monroe Drive	\$137,000	Yes	This is recommended to reduce the potential pedestrian/vehicle conflicts associated with the free flowing loop ramps. Pedestrians will still be accommodated on the south side of the roadway.

A meeting was held on May 30, 2008 to discuss the above recommendations. Brent Story, Jim Simpson, and Clay Bastian with Road Design, and Brian Summers, Ron Wishon and Lisa Myers with Engineering Services were in attendance.

The results above reflect the consensus of those in attendance and those who provided input.

Approved: Gerald M. Ross  
Gerald M. Ross, P. E., Chief Engineer

Date: 5/31/08

Approved: Richard Wayne Fedor  
for Rodney Barry, P. E., FHWA Division Administrator

Date: 7/21/2008

BKS/REW

Attachments

NH-985-1(340) Hall

P.I. No. 110465

VE Study Implementation

Page 4.

c: Gus Shanine  
R. Wayne Fedora  
Todd Long  
Paul Liles  
Bill Ingalsbe  
Bill DuVall  
Judy Meisner  
James Magnus  
Randy Davis  
Shannon Giles  
Toby Hammonds  
Brent Story  
Jim Simpson  
Clay Bastian  
Laura Rish  
Katherine Russett  
Ken Werho  
Grant Waldrop  
Lisa Myers



## Preconstruction Status Report By PI Number

Print Date: 05/30/2008

PROJID	COUNTY	DESCRIPTION	MGMT. ROW DATE	SCHED DATE	MGMT. LET DATE
--------	--------	-------------	-------------------	---------------	-------------------

NH000-0985-01(340)

FIELD DIST: 1

I-985 @ SR 11/US 129 NB EXIT LOOP &amp; SB EXIT

**TIP #:** GH-048

TWIN:

**US:** 1-985

**MPO:** Gainesville

EST DATE: 10/1/2007

MODEL YR: 2030

**PROJ MGR:** Bastian, Clay

PROJ LENGTH: 1.24

**PROG** Reconstruction/Rehabili

**TYPE** Interchange

**TYPE:** tation

**WORK:**

*LET RESP:* DOT

<i>Phase</i>	<i>Approved</i>	<i>Proposed</i>	<i>Cost</i>	<i>Fund</i>	<i>Status</i>
<i>PE</i>	1997	1997	1,133,000.00	Q05	AUTHORIZED
<i>ROW</i>	LR	LR	1,646,000.00	L050	PRECST
<i>ROW</i>	1998	1998	889,000.00	34A	AUTHORIZED
<i>ROW</i>	2000	2000	3,415,000.00	Q24	AUTHORIZED
<i>CST</i>	LR	LR	19,700,000.00	L050	PRECST
Congressional		9			

<i>SCHED START</i>	<i>SCHED FINISH</i>	<i>ACTIVITY</i>	<i>ACTUAL START</i>	<i>ACT/EST FINISH</i>	<i>PCT</i>	<i>DISTRICT COMMENTS</i>

BIKE PROVISIONS INCLUDED?: N MEASUREMENT SYSTEM: E CONSULTANT: N UT EST: \$ 434,000.00

**PDD:** FF>>. Redesign for Pedestrians, 2/17/03

**Bridge:** WMD 07/10/2000

**Design:** CCB:LOOKING AT NEW ALIGNMENT TO REDUCE IMPACTS 7-9-04

**EIS:** CE\Apvd\11-30-01\Re11-27-02\NoSched\Rish(3-18-08)

LGPA: GAINESVILLE REF UTL 9-00]HALL NO UTL 10-96.

**Planning:** CONCEPT REPORT COST 6-2-98 = \$11 300 000 + \$ 2 000 000/RW

**Programming:** PR2/P=6-26-97#1/R=3-11-98#2/R=6-99#3 3-00#4 4-2000#5 2-03#6 2-03#7 3-07

**ROW:** OEL to call Elachee Nature Center 11-04-02

Railroad: NO

**Traffic Op:** >KN/TF/SND PLNS FR S&M/SGNL WH 50% CMPLT'05 12061\$+

**Utility:** NEED 2ND SUBMISSION PLANS 06/01/00

**EMG:** M1534 (H85(94)-W/V88) DTM

**R/W INFORMATION:**

PREL PARCEL CT: 25      TOTAL PARCEL CT: 1      ACQUIRED BY: DOT      ACO MGR: Brock, Michelle

UNDER-REVIEW CT: 0    RELEASED CT: 1    OPT-PEND CT: 0    DEEDS CT: 0    COND-PEND CT: 0    COND-FILED CT: 1

RW CERT DT: ACQUIRED CT: 1 RELOCATION CT: 0

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

---

**INTERDEPARTMENT CORRESPONDENCE**

<b>FILE</b>	NH000-0985-01(340) Hall County P.I. No. 110465 I-985 @ SR 11 Interchange Reconstruction	<b>OFFICE</b>	Road Design
		<b>DATE</b>	May 21, 2008
<b>FROM</b>	Brent Story, P.E., State Road and Airport Design Engineer <i>Brent A. Story</i>		
<b>TO</b>	Brian Summers, P.E., Project Review Engineer Attn: Lisa Myers		
<b>SUBJECT    VALUE ENGINEERING STUDY – FINAL REPORT RESPONSE</b>			

Below are the responses to the Value Engineering Study conducted on January 14-17, 2008, for the above referenced project. Each comment was studied and addressed by the Department's Project Manager.

**ITEM NUMBER A-1:**

***To eliminate the CD lanes through the Interchange and tie the ramps directly into mainline I-985 roadway using standard acceleration/ deceleration lanes.***

COMMENTS: Traffic analysis of this alternate indicated a Level of Service F for ramp diverge and merge. Future connectivity, proposed Limestone Pkwy Extension, would require a CD system, as proposed from exit 20 to exit 24. With the current, proposed design, constructability is not an issue since most construction is outside of the existing roadway and therefore out of traffic. Therefore, this item is not recommended for implementation.

**ITEM NUMBER A-3:**

***Alternate to A-1 To construct a single lane CD roadway through the Interchange***

COMMENTS: Traffic analysis of this alternate indicated a LOS D southbound merge am and a LOS F northbound pm diverge utilizing a one lane CD therefore requiring a two lane CD system to provide an acceptable level of service. AASHTO "A Policy on Geometric Design of Highways and Streets" 2004, page 543, "The minimum arrangement for a CD system is two CD, two core, two core, two CD". Therefore, this item is not recommended for implementation.



**ITEM NUMBER A-5:**

***To increase the distance between Ridge Road and the SB Ramp Intersection, reduce the size of the WB to SB loop ramp, and protect the sidewalk/ ramp crossing.***

COMMENTS: The size of the WB to SB loop ramp was designed to reduce impacts to waters of the US in this quadrant. The VE proposal creates additional impacts to state/ US waters by increasing the length of pipe to over 300 feet which would require an Individual Permit. The related mitigation costs would be greater than the VE proposed savings. Therefore, the implementation of this item is not recommended.

**ITEM NUMBER A-7, I-1:**

***To reduce the width of the through travel lanes on SR 11, the SR 11 Bridges, and the cross streets from 12 feet to 11 feet (Assumes Open Dual Structures).***

COMMENTS: This item is not recommended due to the volume of traffic 31,750 ADT with 10% trucks projected, and a posted speed of 45 mph. The typical section includes a raised median. Open dual structures are not an option because the raised median should be carried across the bridge. Blunt barrier ends must be protected. The narrow (20') medians do not have enough width to allow proper guardrail lengths to protect the barrier ends and could impede sight distance. In addition, the cost associated with installation and maintenance of guardrail, anchorages and or attenuators would be greater than closing in the bridge.

**ITEM NUMBER I-3:**

***12 foot lane Alternate to A-7, I-1 To eliminate the raised concrete median on the SR 11 Bridge by maintaining the dual structure concept (12-foot lanes).***

COMMENTS: See above. This item is not recommended for implementation.

**ITEM NUMBER I-4:**

***To revise the cost estimate to reflect current bridge widening cost (both bridge and concrete retaining wall abutment widening).***

COMMENTS: Cost estimate will be verified and revised, if needed.

**ITEM NUMBER K-1:**

***To eliminate the concrete barrier between the CD lanes and the mainline roadway.***

COMMENTS: Either a positive barrier or clear zone shall be provided to prevent inappropriate lane/roadway changes. The use of median barrier allows a narrower footprint reducing required right-of-way. Therefore, the implementation of this item is not recommended.

**ITEM NUMBER K-2:**

***Alternate to K-1 to use dual face guardrail in-lieu-of concrete median barrier between the CD lanes and the mainline roadway.***

COMMENTS: Either a positive barrier or clear zone shall be provided to prevent inappropriate lane/roadway changes. The use of guardrail in a ditch will cause drainage and maintenance problems.

**ITEM NUMBER L-2:**

***To consider realigning the NB I-985 Off Ramp closer to the signalized on-ramp intersection to provide additional weaving space for the ramp traffic.***

COMMENTS: This recommendation will be implemented. Additional weaving distance will be provided and will reduce potential pedestrian/vehicle conflicts.

**ITEM NUMBER N-2:**

***To use a grass median in-lieu-of raised concrete median along SR 11.***

COMMENTS: This item as presented is not recommended for implementation. The existing traffic along SR 11 is greater than 18,000 ADT with a projected traffic volume greater than 29,000 ADT. The proposed SR 11 typical is three lanes in each direction. Traffic volume and typical section require a positive separation of opposing traffic. The flush grassed median as proposed creates drainage problems. In super elevated sections storm runoff would flow into the median, and without sufficient width to depress the median, storm runoff would then continue across the opposing traffic lanes. Therefore, a raised median, which can be landscaped, is the desired design.

**ITEM NUMBER P-2, 3 & 4:**

***To eliminate the sidewalk on the north side of SR 11 between Ridge Road & the SB Off Ramp, on the south side of SR 11 between the NB On Ramp & Monroe Drive, and on south Monroe Drive,***

COMMENTS: The implementation of this item is recommended. Pedestrian traffic would be limited to the southern side of the roadway and reduce potential pedestrian/ vehicle conflicts.

Please contact Clay Bastian or Erik Rohde at (404) 656-5400 for any additional information or comments you may have.

BAS:JSS:CCB



## Wishon, Ron

---

**From:** Robbins, Dana [Dana.Robbins@fhwa.dot.gov]  
**Sent:** Thursday, May 22, 2008 5:21 PM  
**To:** Wishon, Ron  
**Cc:** Fedora, R.Wayne; Allen, Katy  
**Subject:** Declined: VE Implementation Meeting --- NH-985-1(340) Hall --- P.I. No. 110465 --- I-985 @ S.R. 11/U.S. 129 Interchange

Ron,

I will be out of town tomorrow, but I would like to provide a couple of comments and/or questions. I'm not familiar with the project, so if you have any questions about my comments, please call me.

Idea A-7 & I-1 - This idea is to reduce lane width from 12' to 11'. The green book states that 12' lane width is desirable on both rural and urban facilities. The greenbook also states that lane widths of less than 12' should be used in certain situations, such as in areas where factors such as restricted ROW or existing development become stringent controls. Reducing the cost of a project through a VE study is not by itself a justification for reducing lane width.

Idea I-3 suggests constructing the westbound bridge with no sidewalks. Is it necessary to eliminate the sidewalk to accomplish this idea? If pedestrians are required to cross SR 11 to get to a bridge with sidewalks, and then have to cross SR 11 again to get to their destination, they may just cross the bridge that has no sidewalks, which may not be safe. Also, if sidewalks were shown on both sides of SR 11 in the environmental document, but they are deleted from one side in design, the project may not provide the facility that was selected through the environmental process.

Idea P-2, 3, and 4 - We have a concern with removing the continuous sidewalk from SR 11 or Monroe Drive. The VE study should be a means of reducing the cost of the project while providing equivalent accommodations, but not a means of reducing cost by removing accommodations. Providing sidewalk on one side of SR 11 alone is not providing the same accommodations. Also, if sidewalks were shown on both sides during the environmental process, but are deleted during design, the project may not provide the facility that was selected through the environmental process.

Thanks for allowing me to provide input into this VE Study.

Dana

Dana Robbins, P.E.  
Transportation Safety Engineer  
FHWA - Georgia Division  
61 Forsyth Street, SW  
Suite 17T100  
Atlanta, Georgia 30303